AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A method for diagnosing the normality/abnormality of an output of an installed photovoltaic power system, comprising the steps of:

comparing a reference output characteristic obtained chronologically in accordance with an installation condition of said photovoltaic power system with a measured output characteristic in said photovoltaic power system obtained during operation of the photovoltaic power system itself, said installation condition includes a topography of an installation site, meteorological conditions and configuration of the photovoltaic power system, and

diagnosing the normality/abnormality of the output of said photovoltaic power system based on the comparison result,

wherein said photovoltaic power system in diagnosed as normal only if said measured output characteristic is greater than a first predetermined value and less than a second predetermined value, said first and second predetermined values being based on said reference output characteristic,

wherein comparisons of the reference output characteristic and the measured output characteristic are performed at different time points of a day,

wherein said photovoltaic power system is diagnosed as normal if the following condition is satisfied, a base value (b) times a correction factor (v) times a lower limit diagnosis factor (r) is less than an actual measured value which is less than the base value (b) times the correction factor (v) times an upper limit diagnosis factor (s).

Claim 2 (original): The diagnosis method according to claim 1, wherein

the installation condition of said photovoltaic power system includes, at least, one of the following installation site, installation direction, installation angle and configuration.

Claim 3 (original): The diagnosis method according to claim 1, further comprising the step of:

diagnosing the cause, in the case that the output of said photovoltaic power system is abnormal, based on the comparison result.

Claim 4 (original): The diagnosis method according to claim 1, wherein

the reference output characteristic and the output characteristic include, at least, one of the following: direct current voltage, alternating current voltage, direct current electric energy and alternating current electric energy.

Claim 5 (Currently Amended): A method for diagnosing the normality/abnormality of an output of an installed photovoltaic power system, comprising the steps of:

calculating a reference output characteristic chronologically at the time of normal operation of the photovoltaic power system itself in accordance with an installation condition of said photovoltaic power system;

measuring an output characteristic chronologically in said photovoltaic power system obtained during operation of the photovoltaic power system itself;

comparing the calculated reference output characteristic chronologically with the measured output characteristic; and

diagnosing the normality/abnormality of the output of said photovoltaic power system based on the comparison result,

wherein comparisons of the reference output characteristic and the measured output characteristic are performed at different time points of a day,

wherein said photovoltaic power system is diagnosed as normal if the following condition is satisfied, a base value (b) times a correction factor (v) times a lower limit diagnosis factor (r) is less than an actual measured value which is less than the base value (b) times the correction factor (v) times an upper limit diagnosis factor (s).

Claim 6 (original): The diagnosis method according to claim 5, wherein

the installation condition of said photovoltaic power system includes, at least, one of the

following: installation site, installation direction, installation angle and configuration.

Claim 7 (original): The diagnosis method according to claim 5, further comprising the step of:

diagnosing the cause, in the case that the output of said photovoltaic power system is abnormal, based on the comparison result.

Claim 8 (original): The diagnosis method according to claim 5, wherein

the reference output characteristic and the output characteristic include, at least, one of the following: direct current voltage, alternating current voltage, direct current electric energy and alternating current electric energy.

Claim 9 (Currently Amended): A method for diagnosing the normality/abnormality of an output of a photovoltaic power system, comprising the step of:

diagnosing the normality/abnormality of the output of said photovoltaic power system during operation based on the past measurement result of an output characteristic chronologically of said photovoltaic power system itself,

wherein comparisons of the reference output characteristic and the measured output characteristic are performed at different time points of a day,

wherein said photovoltaic power system is diagnosed as normal if the following condition is satisfied, a base value (b) times a correction factor (v) times a lower limit diagnosis factor (r) is less than an actual measured value which is less than the base value (b) times the correction factor (v) times an upper limit diagnosis factor (s).

Claim 10 (Currently Amended): A method for diagnosing the normality/abnormality of an output of a photovoltaic power system, comprising the steps of:

obtaining a reference output characteristic chronologically at the time of normal operation of the photovoltaic power system itself in accordance with past measurement result of an output characteristic of said photovoltaic power system;

measuring an output characteristic chronologically in said photovoltaic power system during operation of the photovoltaic power system itself;

comparing the obtained reference output characteristic chronologically with the measured output characteristic; and

diagnosing the normality/abnormality of the output of said photovoltaic power system based on the comparison result,

wherein comparisons of the reference output characteristic and the measured output characteristic are performed at different time points of a day,

wherein said photovoltaic power system is diagnosed as normal if the following condition is satisfied, a base value (b) times a correction factor (v) times a lower limit diagnosis factor (r) is less

than an actual measured value which is less than the base value (b) times the correction factor (v) times an upper limit diagnosis factor (s).

Claim 11 (original): The diagnosis method according to claim 10, wherein

the reference output characteristic is obtained differently for each period of time among the plurality of periods of time gained by dividing a year.

Claim 12 (Currently Amended): The diagnosis method according to claim 10, wherein

in the case that the output of said photovoltaic power system is diagnosed as being abnormal the output characteristic at that time is not reflected in the subsequent reference output characteristic, the output characteristic at that time output of said photovoltaic power system is diagnosed as being normal the output characteristic at that time is reflected in the subsequent reference output characteristic.

Claim 13 (original): The diagnosis method according to claim 10, further comprising the step of:

diagnosing the cause, in the case that the output of said photovoltaic power system is abnormal, based on the comparison result.

Claim 14 (original): The diagnosis method according to claim 10, wherein

the reference output characteristic and the output characteristic include, at least, one of the following: direct current voltage, alternating current voltage, direct current electric energy and alternating current electric energy.

Claim 15 (previously presented): A method for diagnosing the normality/abnormality of an output of a photovoltaic power system, comprising the steps of:

obtaining a reference output characteristic at the time of normal operation of a first photovoltaic power system to be diagnosed in accordance with a measurement result of output characteristic of a second photovoltaic power system, said first and second photovoltaic power system being installed at different sites;

measuring an output characteristic in said first photovoltaic power system during operation;

comparing the obtained reference output characteristic with the measured output characteristic; and

diagnosing the normality/abnormality of the output of said first photovoltaic power system based on the comparison result,

wherein comparisons of the reference output characteristic and the measured output characteristic are performed at different time points of a day.

Claim 16 (Currently Amended): An apparatus for carrying out a diagnosis of the normality/abnormality of an output of an installed photovoltaic power system and/or a diagnosis of the cause whenever the output of said photovoltaic power system is abnormal, comprising:

a storage unit for storing a reference output characteristic chronologically at a time of normal operation of the photovoltaic power system itself in accordance with an installation condition of said photovoltaic power system;

a measurement unit for measuring an output characteristic chronologically in said photovoltaic power system during operation of the photovoltaic power system itself; and

a comparison unit for comparing the reference output characteristic chronologically stored in said storage unit with the measured the output characteristic obtained by said measurement unit,

wherein said photovoltaic power system is diagnosed as normal only if said measured output characteristic is greater than a first predetermined value and less than a second predetermined value, said first and second predetermined values being based on said reference output characteristic,

wherein comparisons of the reference output characteristic and the measured output characteristic are performed at different time points of a day,

wherein said photovoltaic power system is diagnosed as normal if the following condition is satisfied, a base value (b) times a correction factor (v) times a lower limit diagnosis factor (r) is less

than an actual measured value which is less than the base value (b) times the correction factor (v)
times an upper limit diagnosis factor (s).

Claim 17 (original): The diagnosis apparatus according to claim 16, further comprising:

a storage unit for storing the output characteristic measured by said measurement unit.

Claim 18 (original): The diagnosis apparatus according to claim 16, further comprising:

a solar radiation amount measurement unit for measuring an amount of solar radiation in said
photovoltaic power system.

Claim 19 (Currently Amended): An apparatus for carrying out a diagnosis of the
normality/abnormality of an output of an installed photovoltaic power system and/or a diagnosis of
the cause in the case that the output of said photovoltaic power system is abnormal, comprising:

an input unit for accepting an input of an installation condition of said photovoltaic power
system; and that the and

a calculation unit for calculating a reference output characteristic chronologically of said
photovoltaic power system itself, in accordance with the installation condition inputted to said input
unit;

a measurement unit for measuring an output characteristic chronologically in said
photovoltaic power system during operation of the photovoltaic power system itself; and

a comparison unit for comparing the reference output characteristic chronologically calculated by said calculation unit with the measured output characteristic obtained by said measurement unit,

wherein comparisons of the reference output characteristic and the measured output characteristic are performed at different time points of a day,

wherein said photovoltaic power system is diagnosed as normal if the following condition is satisfied, a base value (b) times a correction factor (v) times a lower limit diagnosis factor (r) is less than an actual measured value which is less than the base value (b) times the correction factor (v) times an upper limit diagnosis factor (s).

Claim 20 (original): The diagnosis apparatus according to claim 19, further comprising:

a storage unit for storing output the characteristic measured by said measurement unit.

Claim 21 (original): The diagnosis apparatus according to claim 19, further comprising:

a solar radiation amount measurement unit for measuring an amount of solar radiation in said photovoltaic power system.

Claim 22 (Currently Amended): An apparatus for carrying out a diagnosis of the normality/abnormality of an output of a photovoltaic power system, comprising:

a storage unit for storing a past measurement result of an output characteristic chronologically

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of said photovoltaic power system itself; and

a diagnosis unit for diagnosing the normality/abnormality of the output of said photovoltaic power system based on the measurement result of the photovoltaic power system itself stored in said storage unit,

wherein comparisons of the reference output characteristic and the measured output characteristic are performed at different time points of a day,

wherein said photovoltaic power system is diagnosed as normal if the following condition is satisfied, a base value (b) times a correction factor (v) times a lower limit diagnosis factor (r) is less than an actual measured value which is less than the base value (b) times the correction factor (v) times an upper limit diagnosis factor (s).

Claim 23 (original): The diagnosis apparatus according to claim 22, further comprising:

a determination unit for determining the cause of the abnormality in the case the output of said photovoltaic power system is diagnosed, by said diagnosis unit, as being abnormal.

Claim 24 (original): The diagnosis apparatus according to claim 22, further comprising:

a solar radiation amount measurement unit for measuring an amount of solar radiation in said photovoltaic power system.

Claim 25 (Currently Amended): A method for diagnosing the normality/abnormality of an output of an installed photovoltaic power system, comprising the steps of:

comparing a reference output characteristic chronologically obtained in accordance with an installation condition of said photovoltaic power system with a measured output characteristic in said photovoltaic power system obtained during operation of the photovoltaic power system itself; and

diagnosing the normality/abnormality of the output of said photovoltaic power system based on the comparison result,

wherein said photovoltaic power system is diagnosed as normal only if said measured output characteristic is greater than a first predetermined value and less than a second predetermined value, said first and second predetermined values being based on said reference output characteristic,

wherein comparisons of the reference output characteristic and the measured output characteristic are performed at different time points of a day,

wherein said photovoltaic power system is diagnosed as normal if the following condition is satisfied, a base value (b) times a correction factor (v) times a lower limit diagnosis factor (r) is less than an actual measured value which is less than the base value (b) times the correction factor (v) times an upper limit diagnosis factor (s).

Claim 26 (previously presented): The diagnosis method according to claim 1, wherein said reference output characteristic vary in accordance with actually measured output characteristic.

Claim 27 (previously presented): The diagnosis method according to claim 9, wherein said reference output characteristic vary in accordance with actually measured output characteristic.